
ईसबगोल भूसी — विशिष्टि
(पहला पुनरीक्षण)

Isabgol Husk — Specification
(*First Revision*)

ICS 67.060

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FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Dairy Food grains, Allied products and Other Agricultural Produce Sectional Committee had been approved by the Food and Agriculture Division Council.

Isabgol husk consists of the dry seed coats of the seeds of *Plantago ovata* Forsk (Fam. Plantaginaceae) and is obtained by crushing the seeds and separating the husks by winnowing. A large quantity of *isabgol* husk, also known as psyllium husk is exported. This highlights the need for quality standards both for consumer protection and as a guide to good manufacturing practices.

This standard was first published in 1993 taking assistance from the Pharmacopoeia of India published by the Drugs Controller of India. This revision is being undertaken to align the requirements of the product with the *Isabgol Husk Grading and Marking Rules, 2015* also introducing the grading in this standard based on the Agmark Standard.

In the formulation of this standard, due consideration has been given to the provisions of the *Food Safety and Standards Act, 2006* and the *Rules and Regulations* framed thereunder and the *Legal Metrology (Packaged Commodities) Rules, 2011*. However, this standard is subject to the restrictions imposed under these, wherever applicable.

The composition of the Committee responsible for formulation of the standard is given in Annex C.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

ISABGOL HUSK — SPECIFICATION

(First Revision)

1 SCOPE

This standard prescribes the requirements and the methods of sampling and test for *Isabgol* husk.

2 REFERENCES

The standards given below contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of these standards.

<i>IS No.</i>	<i>Title</i>
1070 : 1992	Reagent grade water — Specification (<i>third revision</i>)
1155 : 1968	Specification for wheat <i>atta</i> (<i>second revision</i>)
2491 : 2013	Food hygiene — General principles — Code of practice (<i>third revision</i>)
4905 : 2015/ ISO 24153 : 2009	Random sampling and randomization procedures (<i>first revision</i>)
5403 : 1999	Method for yeast and mould count of food stuffs and animal feeds (<i>first revision</i>)
5887	Methods for detection of bacteria responsible for food poisoning
(Part 1) : 1976	Isolation, identification and enumeration of <i>Escherichia coli</i>
(Part 3/Sec 1) : 2020 /ISO 6579-1 : 2017	Horizontal method for the detection, enumeration and serotyping of <i>Salmonella</i> , Section 1 Detection of <i>Salmonella</i> spp. (<i>third revision</i>)

3 TERMINOLOGY

For the purpose of this standard, the following definitions shall apply.

3.1 Extraneous Matter — Impurities of extraneous origin like sand, dirt or others which do not belong to the *Isabgol* crop.

3.2 Organic Extraneous Matter — Includes broken or entire embryo, fragments of endosperm or capsular wall of fruits belonging to *Isabgol* crop.

4 GRADES

The product shall be of the following three grades:

- a) Special;
- b) Standard; and
- c) General.

5 REQUIREMENTS

5.1 Description

The *Isabgol* husk shall consist of dry seed coats of the seeds of *Plantago ovata* Forsk. (Fam. Plantaginaceae) meant for human consumption which is obtained by crushing the seeds and separating the husks by winnowing. The product shall consist of white, off-white or translucent, odourless, thin boat shaped structures, 2 to 3 mm long and 0.5 to 1 mm wide. The taste shall be bland and mucilaginous. The products shall be free from insect or fungus infestation and from fermented, musty or other objectionable odours. It shall also be free from any added colours and flavours and any harmful foreign materials.

5.2 Microscopic Examination

The product when subjected to microscopic examination shall conform to the following description:

“Elongated polygonal cells, 90 to 120 μ long, 18 to 27 μ wide, cellulose walled, thickened by secondary deposit.”

5.3 The product shall be manufactured under hygienic conditions (*see* IS 2491).

5.4 The product shall also comply with the requirements given in Table 1.

Table 1 Requirements for *Isabgol* Husk
(Clause 5.4)

SI No.	Characteristic	Requirement			Method of Test, Ref to
		Special Grade	Standard Grade	General Grade	
(1)	(2)	(3)	(4)	(5)	(6)
i)	Moisture, percent by mass, <i>Max</i>	10.0	11.0	11.5	Annex A of IS 1155
ii)	Total ash (dry basis), percent by mass, <i>Max</i>	2.0	2.5	2.9	Annex B of IS 1155
iii)	Acid insoluble ash (dry basis), percent by mass, <i>Max</i>	0.1	0.2	0.3	Annex C of IS 1155
iv)	Organic extraneous matter, percent by mass, <i>Max</i>	0.5	1.0	2.0	Hand separation and weighing (<i>see</i> 3.2)
v)	Swelling test	To pass	To pass	To pass	Annex A
vi)	Yeast and mould count, per g, <i>Max</i>	1 000	1 000	1 000	IS 5403
vii)	<i>Salmonella</i> , in 10 g	Absent	Absent	Absent	IS 5887 (Part 3)
viii)	<i>E. coli</i> , in 1 g	Absent	Absent	Absent	IS 5887 (Part 1)

6 PACKING AND MARKING

6.1 Packing

The product shall be packed in only in sound, clean, dry and well-cleaned containers. The container shall be free from any insect infestation or fungus contamination and also free from any undesirable or obnoxious smell. The product shall be packed in quantities as stipulated under the *Legal Metrology (Packaged Commodities) Rules*, 2011 as well as in accordance with requirements under the *Food Safety and Standards Act*, 2006 and the *Rules and Regulations* framed thereunder.

6.2 Marking

6.2.1 The ink used for marking shall be of such quality which may not contaminate the product. Each pack shall be suitably marked as to give the following information:

- Name and grade of the product;
- Month and year of manufacture;
- Name and address of the manufacturer;
- Batch or Code number;
- Net quantity;
- Maximum retail price inclusive of all taxes;
- Best before.....month.....year; and

- Any other information required under the *Legal Metrology (Packaged Commodities) Rules*, 2011 and the *Food Safety and Standards (Packaging and Labelling) Regulations*, 2011.

6.2.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

7 SAMPLING

Representative samples of the product for ascertaining conformity to the requirements of this standard shall be drawn according to the method given in Annex B.

8 TESTS

8.1 All the tests shall be carried out as specified in 5.2, 5.3 and col 6 of Table 1.

8.2 Quality of Reagents

Unless specified otherwise, pure chemicals shall be employed in tests and distilled water (*see* IS 1070) shall be used where the use of water as reagent is intended.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the test results.

ANNEX A

[Table 1, Sl No. (v)]

SWELLING TEST**A-1 PROCEDURE**

Transfer 1 g sample to a 100 ml stoppered cylinder containing 90 ml of water, shake well for 30 seconds and allow to stand for 24 hours, shaking gently on three occasions during this period. Add sufficient

water to produce 100 ml, mix gently for 30 seconds, avoiding the entrainment of air. Allow to stand for 5 hours and measure the volume of mucilage. Repeat the determination three more times. If average of the four determinations is not less than 40 ml, the material passes the test.

ANNEX B

(Clause 7)

SAMPLING OF ISABGOL HUSK**B-1 SCALE OF SAMPLING****B-1.1 Lot**

In a single consignment, all the containers of the same type, same mass and belonging to the same batch of manufacture shall be grouped together to constitute a lot.

B-1.2 For ascertaining the conformity of the material to the requirements of the specification, samples shall be tested from each lot separately.

B-1.3 The number of containers to be selected from the lot shall depend on the size of the lot and shall be in accordance with Table 2.

Table 2 Scale of Sampling

(Clause B-1.3)

No. of Containers in the Lot	Sample Size
(1)	(2)
Up to 100	3
101 to 300	5
301 to 500	8
501 to 1 000	13
1 000 to 3 000	20
3 001 to 10 000	32
10 001 and above	50

B-1.3.1 These containers from the lot shall be selected at random, In order to ensure the randomness of selection, procedures given in IS 4905 may be followed.

B-2 NUMBER OF TESTS AND CRITERIA FOR CONFORMITY

B-2.1 From each of the containers selected from the lot, a small but approximately equal quantity of material shall be taken and thoroughly mixed so as to constitute the composite sample. The quantity of material in the composite sample shall be three times the quantity of material required for carrying out all the tests given in the specification.

B-2.2 The composite sample shall be divided into three equal parts, one for the purchaser, another for the supplier and third for the referee so as to be used in case of a dispute between the two.

B-2.3 All the characteristics given in the specification shall be tested on the composite sample.

B-2.4 The lot shall be declared as conforming to the requirements of the specification, if all the test results on the composite sample meet the relevant specification requirements.

ANNEX C

(Foreword)

COMMITTEE COMPOSITION

Foodgrains, Allied Products and Other Agricultural Produce Sectional Committee, FAD 16

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